



What should I already know?

- Refer to the fact that they need light in order to see things and that dark is the absence of light.
 - Notice that light is reflected from surfaces.
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
- Recognise that shadows are formed when the light from a light source is blocked by an opaque object.
 - Find patterns in the way that the size of shadows change..



What will I know by the end of this term?

- Recognise that light appears to travel in straight lines.
 - Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.
 - Create a model of light travelling/investigate how we see colour.
 - Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.
 - To create a periscope.
 - Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.

refraction

This is when light bends as it passes from one medium to another. E.g. Light bends when it moves from air into water.



Key Knowledge

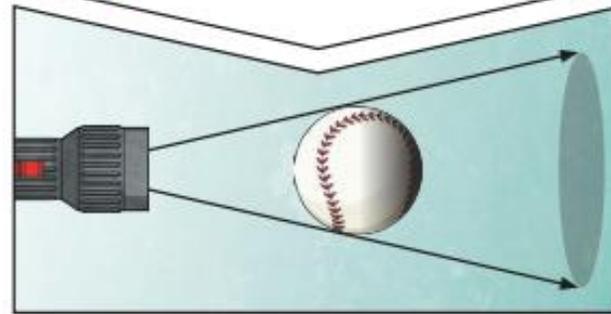


The spoon in this water looks as if it is bent. This is because **light** bends when it moves from air to water. When **light** bends in this way, it is called **refraction**.

Isaac Newton shone a **light** through a transparent **prism**, separating out **light** into the colours of the rainbow (red, orange, yellow, green, blue, indigo and violet) - the colours of the **spectrum**. All the colours together merge and make visible **light**.



A **shadow** is always the same shape as the object that casts it. This is because when an **opaque** object is in the path of **light** travelling from a **light source**, it will block the **light** rays that hit it, while the rest of the **light** can continue travelling.



Key Vocabulary

light	A form of energy that travels in a wave from a source.
light source	An object that makes its own light .
reflection	Reflection is when light bounces off a surface, changing the direction of a ray of light .
incident ray	A ray of light that hits a surface.
reflected ray	A ray of light that has bounced back after hitting a surface.
the law of reflection	The law states that the angle of the incident ray is equal to the angle of the reflected ray .